

Form PTO-1595 (Rev. 07/05)  
OMB No. 0651-0027 (exp. 6/30/2008)

U.S. DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office

### RECORDATION FORM COVER SHEET PATENTS ONLY

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

**1. Name of conveying party(ies)**

Yuelin Shen  
Youhe Zhang  
Sujian Huang  
Peter T. Cariveau

Additional name(s) of conveying party(ies) attached?  Yes  No

**2. Name and address of receiving party(ies)**

Name: Smith International, Inc.

Internal Address: Patent Services

Street Address: 16740 Hardy Street

City: Houston

State: Texas

Country: US Zip: 77032

Additional name(s) & address(es) attached?  Yes  No

**3. Nature of conveyance/Execution Date(s):**

Execution Date(s) 8/20/07, 8/22/07, & 8/29/07

- Assignment  Merger
- Security Agreement  Change of Name
- Joint Research Agreement
- Government Interest Assignment
- Executive Order 9424, Confirmatory License
- Other \_\_\_\_\_

**4. Application or patent number(s):**

This document is being filed together with a new application.

A. Patent Application No.(s)

11781,648

B. Patent No.(s)

Additional numbers attached?  Yes  No

**5. Name and address to whom correspondence concerning document should be mailed:**

Name: Y. Renee Alsandor

Internal Address: Smith International, Inc.

Street Address: 16740 Hardy Street

City: Houston

State: Texas Zip: 77032

Phone Number: 281-233-5677

Fax Number: 281-233-5970

Email Address: raalsandor@smith.com

**6. Total number of applications and patents involved: 1**

**7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00**

- Authorized to be charged by credit card
- Authorized to be charged to deposit account
- Enclosed
- None required (government interest not affecting title)

**8. Payment Information**

a. Credit Card Last 4 Numbers \_\_\_\_\_  
Expiration Date \_\_\_\_\_

b. Deposit Account Number 192745

Authorized User Name Elaine Samford

**9. Signature:**

*Y. Renee Alsandor*  
Signature

10-17-07  
Date

Y. Renee Alsandor

Name of Person Signing

Total number of pages including cover sheet, attachments, and documents:

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:  
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

CH \$40.00 192745 11781648

**ASSIGNMENT – WORLDWIDE**

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned individual(s) (referred to herein as the "INVENTOR(S)") hereby assign, transfer, and set over to:

**Smith International Inc**

Having the following address:

**16740 Hardy Street  
Houston, Texas 77032**

(Referred to herein as "COMPANY"), its successors, and assigns, the entire right, title, and interest, worldwide, in and to the invention known by the following title:

**CUTTER GEOMETRY FOR INCREASED BIT LIFE AND BITS INCORPORATING THE SAME**

for which the undersigned has/have executed an application for patent in the United States of America on or about this same day, together with said patent application, all divisions, continuations, continuations-in-part, reissues, re-examinations, and extensions thereof, and all United States Letters Patent and any legal equivalent thereof in a foreign country, including the right to claim priority, which may be granted therefor. Such interest represents the entire ownership of said applications and Letters Patent when granted and is to be owned by COMPANY, its successors, and assigns, or their legal representatives, for the full and entire term for which such Letters Patent may be granted or extended, as fully and entirely as the same would have been enjoyed by the INVENTOR(S) if this assignment had not been made.

In addition, the undersigned INVENTOR(S) each hereby agrees:

1. To sign and execute any further documents which may be necessary or desirable, lawful, and proper in connection with the prosecution of all applications for patent(s) on the INVENTION in the United States Patent and any legal equivalent thereof in a foreign country, including without limitation said application and all divisions, continuations, continuations-in-part, amendments thereof, and all interference proceedings associated therewith, or otherwise necessary or desirable to secure the title thereto to COMPANY;
2. To execute all papers and documents and to perform all lawful acts which may be necessary in connection with claims to priority or otherwise under the International Convention for the Protection of Industrial Property or similar treaties or agreements;
3. To perform all lawful affirmative acts which may be necessary to obtain the grant of a valid and enforceable patent to COMPANY;

The undersigned INVENTOR(S) each hereby authorizes and requests the Commissioner of Patents and Trademarks in the United States to issue any and all Letters Patent resulting from said application, including without limitation any division, continuation, continuation-in-part, reissue or re-examination thereof to COMPANY.

The undersigned INVENTOR(S) each hereby grants to the firm of Smith International Inc. the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for the recordation of this document.

IN WITNESS WHEREOF, this Assignment has been executed by each of the undersigned individuals on the date appearing by such individual's signature:

<u>8/22/07</u>	1 <sup>st</sup> Inventor Signature: <u>[Signature]</u>
Date	Print or Type Name: <b>Yuelin Shen</b>
<u>8/20/07</u>	2 <sup>nd</sup> Inventor Signature: <u>[Signature]</u>
Date	Print or Type Name: <b>Youhe Zhang</b>
_____	3 <sup>rd</sup> Inventor Signature: _____
Date	Print or Type Name: <b>Sujian Huang</b>
_____	4 <sup>th</sup> Inventor Signature: _____
Date	Print or Type Name: <b>Peter T. Cariveau</b>

Notary Public

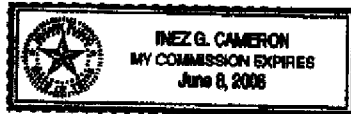
State of: Texas  
County of: Harris

Before me personally appeared: Yuelin Shen 1<sup>st</sup> Inventor Youhe Zhang 2<sup>nd</sup> Inventor  
\_\_\_\_\_ 3<sup>rd</sup> Inventor \_\_\_\_\_ 4<sup>th</sup> Inventor

Each of whom acknowledged the foregoing instrument to be a free act and deed and also represented that he/she is authorized to execute this Assignment.

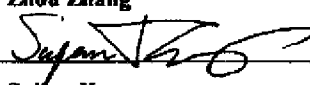
Dated: 8/20 & 22/07

[Signature]  
Notary Public My Commission expires: 6-8-08



When this Assignment is not filed concurrently with the patent application, the following identifying information may be added after execution:  
U.S. Application Serial No.: 11/781,648  
Filing Date: 07/23/2007

IN WITNESS WHEREOF, this Assignment has been executed by each of the undersigned individuals on the date appearing by such individual's signature:

_____	<b>1<sup>st</sup> Inventor Signature:</b> _____
<b>Date</b>	<b>Print or Type Name:</b> <b>Yuclin Shen</b>
_____	<b>2<sup>nd</sup> Inventor Signature:</b> _____
<b>Date</b>	<b>Print or Type Name:</b> <b>Zhou Zhang</b>
<u>8/29/2007</u>	<b>3<sup>rd</sup> Inventor Signature:</b> 
<b>Date</b>	<b>Print or Type Name:</b> <b>Sujian Huang</b>
_____	<b>4<sup>th</sup> Inventor Signature:</b> _____
<b>Date</b>	<b>Print or Type Name:</b> <b>Peter T. Cariveau</b>

Notary Public

State of:  
County of:

Before me personally appeared: \_\_\_\_\_  
1<sup>st</sup> Inventor 2<sup>nd</sup> Inventor  
3<sup>rd</sup> Inventor 4<sup>th</sup> Inventor

Each of whom acknowledged the foregoing instrument to be a free act and deed and also represented that he/she is authorized to execute this Assignment.

Dated: \_\_\_\_\_  
Notary Public My Commission expires: \_\_\_\_\_

When this Assignment is not filed concurrently with the patent application, the following identifying information may be added after execution:  
U.S. Application Serial No.: 11/781,646  
Filing Date: 07/23/2007

IN WITNESS WHEREOF, this Assignment has been executed by each of the undersigned individuals on the date appearing by such individual's signature:

_____	<b>1<sup>st</sup> Inventor Signature:</b> _____
<b>Date</b>	<b>Print or Type Name:</b> <b>Yuelin Shen</b>
_____	<b>2<sup>nd</sup> Inventor Signature:</b> _____
<b>Date</b>	<b>Print or Type Name:</b> <b>Zhou Zhang</b>
_____	<b>3<sup>rd</sup> Inventor Signature:</b> _____
<b>Date</b>	<b>Print or Type Name:</b> <b>Sujian Huang</b>
<u>8/20/2007</u>	<b>4<sup>th</sup> Inventor Signature:</b> <u><i>Peter T. Cariveau</i></u>
<b>Date</b>	<b>Print or Type Name:</b> <b>Peter T. Cariveau</b>

Notary Public

State of: Utah  
County of: Utah

Before me personally appeared: \_\_\_\_\_  
1<sup>st</sup> Inventor
2<sup>nd</sup> Inventor  
3<sup>rd</sup> Inventor
Peter T. Cariveau  
4<sup>th</sup> Inventor

Each of whom acknowledged the foregoing instrument to be a free act and deed and also represented that he/she is authorized to execute this Assignment.

Dated: Aug 20, 2007 *Stobrac W. Judge*  
Notary Public My Commission expires: May 23, 2009



When this Assignment is not filed concurrently with the patent application, the following identifying information may be added after execution:  
U.S. Application Serial No.: 11/781,648  
Filing Date: 07/23/2007